

U.S. Patent Application Serial No. 10/560,037
Amendment filed November 6, 2008
Reply to OA Dated August 7, 2008

AMENDMENTS TO THE CLAIMS:

Please amend claim 1, as follows. This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): A scroll compressor wherein a fixed scroll having a fixed scroll wrap on a fixed mirror plate and an orbiting scroll having an orbiting scroll wrap on an orbiting mirror plate are combined with each other to form a plurality of compressed chambers, a back pressure chamber is provided on a surface on the opposite side from said orbiting scroll wrap surface of said orbiting scroll, a suction space is formed in an outer periphery of said fixed scroll, said back pressure chamber is divided by an annular seal into an inner region and an outer region, a lubricant oil in a discharge pressure state is supplied to said inner region of said annular seal, a portion of the lubricant oil is decompressed at a narrowed portion and supplied to said outer region, the lubricant oil in the outer region is supplied to [[a]] said suction space, pressure in said inner region is set to discharge pressure Pd, pressure in said outer region is set to a predetermined pressure Pm between a suction pressure Ps and a discharge pressure Pd, thrust force is applied to a back surface of said orbiting scroll, thereby bringing said orbiting scroll into contact with said fixed scroll, rotation of said orbiting scroll is restrained by a rotation-restraint member, said orbiting scroll is allowed to orbit, thereby moving said compressed chamber toward a center of scroll while reducing

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its volume, refrigerant gas is sucked from the suction space into said compressed chamber and compressed,

a pressure ratio (P_d/P_s) between the discharge pressure P_d and the suction pressure P_s is set to 2 to 6, and

a ratio (d/D) of a diameter D of said orbiting mirror plate of said orbiting scroll and an outer diameter d of said annular seal is set greater than 0.5.

Claim 2 (Original): The scroll compressor according to claim 1, wherein a back pressure ΔP ($=P_m - P_s$) applied to said outer region divided by said annular seal is set such that a ratio ($\Delta P/P_o$) of the back pressure ΔP and a saturation vapor pressure P_o when said refrigerant gas is at 0°C is substantially a constant value and 0.2 or lower.

Claim 3 (Previously presented): The scroll compressor according to claim 1, wherein said refrigerant gas sucked into said suction space includes liquid refrigerant having dryness parameter of 0.5 or less.

Claim 4 (Previously presented): The scroll compressor according to claim 1, wherein carbon dioxide is used as said refrigerant.

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Claim 5 (Previously presented): The scroll compressor according to claim 2, wherein said refrigerant gas sucked into said suction space includes liquid refrigerant having dryness parameter of 0.5 or less.

Claim 6 (Previously presented): The scroll compressor according to claim 2, wherein carbon dioxide is used as said refrigerant.